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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,722	09/28/2000	Donald L. Wilson	12548US02	2793

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EXAMINER

GRIER, LAURA A

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/676,722

Applicant(s)

WILSON ET AL.

Examiner

Laura A Grier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) 8-21 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-34 is/are allowed.
- 6) ☒ Claim(s) 1,3-7,22-36,39-41 and 43-46 is/are rejected.
- 7) ☒ Claim(s) 2,37 and 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date 20050106.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

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DETAILED ACTION

1. The indicated allowability of claims 1-7, 22-23, is withdrawn in view of the newly discovered reference(s) to Hosaska et al. Rejections based on the newly cited reference(s) follow.

Drawings

2. The drawings are objected to because the corrected drawing of figure 1B received on 6/22/03 fails to disclose the tube portion 41 as previously disclosed in the original informal drawing received on 9/28/00; and in the corrected drawing received on 6/22/03, reference number 41 should be labeled as 39 to indicate flexible ear tip as disclosed in drawing received on 9/28/00. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified

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and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the reference number 41 in the corrected drawing of 1B (based on the original drawing dated 6/28/00) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1, and 4-5** are rejected under 35 U.S.C. 102(b) as being anticipated by Hosaka et al. (herein, Hosaka), U. S. Patent No. 5781638.

Regarding claim 1, Hosaka discloses an electro-acoustic transducer (earphone device). Hosaka's disclosure comprises a housing (4), which reads on a housing; a speaker unit (1), which reads on a receiver; and an optical disc player, which reads on an audio signal source; col. 3, lines 24-32; an attachment portion (10) – col. 4, lines 22-32; which reads on a flexible ear tip; a pinna inserting portion (5) with a distal end (5a) reads on a tube nipple – col. 3, lines 61-63, wherein the pinna inserting portion with a distal end extends from inside of the housing coupled the speaker unit (figures 5-7), which reads on the first end and is coupled to the attachment portion (10) external the housing (4), which reads on the second end; and specifically in respect to figure 7, the pinna inserting portion with a distal end has a projected longitudinal axis, excluding the longitudinal axis of the housing/main tube portion, which forms an obtuse angle in respect the vertical axis of the housing when the earphone device is worn in ear of the user, wherein the earphone device is inserted in to a least a portion of the ear canal and supported entirely by the ear canal when worn by the user – Col. 4, lines 32-45, and lines 55-58).

Regarding claim 4, Hosaka discloses everything claimed as applied above (see claim 1). Hosaka further discloses that the attachment is an elastic material, rubber (col. 4, lines 22-24), which provides an inherent support of a foam ear tip portion.

Regarding claim 5, Hosaka discloses everything claimed as applied above (see claim 1). Hosaka further discloses the distal end (5), which reads on a rigid; the distal end of the pinna inserting portion coupled to the attachment portion (10) and the auditory canal fitting portion (12), which indicates 2nd end of the tube nipple is positioned within the flexible tube portion of the flexible ear tip.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 3, 6, 7, 22-23, 35-36, 38-41, 43-46** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosaka.

Regarding claims 3 and 7, Hosaka discloses everything claimed as applied above (see claim 1). Hosaka fails to disclose a flexible channel located between the output port of the receiver and the first end of the rigid tube nipple. However, Hosaka does not disclose any restriction to the acoustic path or channel to pinna inserting portion. And thus, a flexible channel of an acoustic tube or channel is well known in the art. Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of

Hosaka by implementing a flexible material for constructing the acoustic path or tubing, such as a elastic plastic material, which a commonly used tubing structure and material, for the purpose of enabling adjustable adaptation of the acoustic tube of the earphone device.

Regarding claim 6, Hosaka discloses everything claimed as applied above (see claim 1). The examiner takes official notice that the use of an acoustic damper was well known. Thus, it would have been obvious to of the ordinary skill in the art at the time the invention was made to modify the invention of Hosaka by implementation an acoustic damper for the purpose of damping the transmission of the signal path with tube and providing an modified frequency response of the earphone device as desired for optimal performance.

Regarding claims 22-23, Hosaka discloses an electro-acoustic transducer (earphone device). Hosaka's disclosure comprises a housing (4), which reads on a housing; a speaker unit (1), which reads on a receiver; and an optical disc player, which reads on an audio signal source; col. 3, lines 24-32; an attachment portion (10) – col. 4, lines 22-32; which reads on a flexible ear tip; a pinna inserting portion (5) with a distal end (5a) reads on a rigid tube nipple – col. 3, lines 61-63, wherein the pinna inserting portion with a distal end extends from inside of the housing coupled the speaker unit (figures 5-7), which reads on the first end and is coupled to the attachment portion (10) external the housing (4), which reads on the second end; and the distal end of the pinna inserting portion coupled to the attachment portion (10), reads the tube nipple positioned with the flexible tube portion of the flexible ear tip; wherein the earphone device is inserted in to a least a portion of the ear canal and supported entirely by the ear canal when worn by the user – Col. 4, lines 32-45, and lines 55-58). Hosaka fails to disclose a flexible channel located between the output port of the receiver and the first end of the rigid tube nipple.

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However, Hosaka does not disclose any restriction to the acoustic path or channel to pinna inserting portion. And thus, a flexible channel of an acoustic tube or channel is well known in the art.

Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Hosaka by implementing a flexible material for constructing the acoustic path or tubing, such as a elastic plastic material, which a commonly used tubing structure and material, for the purpose of enabling adjustable adaptation of the acoustic tube of the earphone device.

Regarding claim 35, Hosaka discloses an electro-acoustic transducer (earphone device). Hosaka's disclosure comprises a housing (4), which reads on a housing; a speaker unit (1), which reads on a receiver; and an optical disc player, which reads on an audio signal source; col. 3, lines 24-32; an attachment portion (10) – col. 4, lines 22-32; which reads on a flexible ear tip; the attachment portion is an elastic material, rubber (col. 4, lines 22-24), which provides an inherent support of a foam ear tip portion; a pinna inserting portion (5) with a distal end (5a) reads on a tube nipple – col. 3, lines 61-63, wherein the pinna inserting portion with a distal end extends from inside of the housing coupled the speaker unit (figures 5-7), which reads on the first end and is coupled to the attachment portion (10) external the housing (4), which reads on the second end; and the distal end of the pinna inserting portion coupled to the attachment portion (10), reads the tube nipple positioned within and acoustically coupled to the flexible tube portion of the flexible ear tip. However, Hosaka fails to disclose the response of the TDH-39 standard. The examiner takes official notice that the TDH-39 standard is well known in the art. Thus, it would

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have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Hosaka by providing TDH-39 standard quality of frequency response at 0db at a frequency of 6 or 8 KHz as desired for the purpose of acquiring an efficient frequency responses for optimal performance.

Regarding claim 36, Hosaka discloses everything claimed as applied above (see claim 35). Hosaka further discloses specifically in respect to figure 7, the pinna inserting portion with a distal end has a projected longitudinal axis, excluding the longitudinal axis of the housing/main tube portion, which forms an obtuse angle in respect the vertical axis of the housing when the earphone device is worn in ear of the user.

Regarding claims 38-39, Hosaka discloses everything claimed as applied above (see claim 35). Hosaka fails to disclose a flexible channel located between the output port of the receiver and the first end of the rigid tube nipple. However, Hosaka does not disclose any restriction to the acoustic path or channel to pinna inserting portion. And thus, a flexible channel of an acoustic tube or channel is well known in the art. Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Hosaka by implementing a flexible material for constructing the acoustic path or tubing, such as a elastic plastic material, which a commonly used tubing structure and material, for the purpose of enabling adjustable adaptation of the acoustic tube of the earphone device.

Regarding claim 40, Hosaka discloses everything claimed as applied above (see claim 1). However, Hosaka fails to disclose an acoustic damper. The examiner takes official notice that the use of an acoustic damper was well known. Thus, it would have been obvious to of the ordinary skill in the art at the time the invention was made to modify the invention of Hosaka by

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implementation an acoustic damper for the purpose of damping the transmission of the signal path with tube and providing an modified frequency response of the earphone device as desired for optimal performance.

Regarding claims 41, Hosaka discloses an electro-acoustic transducer (earphone device). Hosaka's disclosure comprises a housing (4), which reads on a housing; a speaker unit (1), which reads on a receiver; and an optical disc player, which reads on an audio signal source; col. 3, lines 24-32; an attachment portion (10) – col. 4, lines 22-32; which reads on a flexible ear tip; a pinna inserting portion (5) with a distal end (5a) reads on a tube nipple – col. 3, lines 61-63, wherein the pinna inserting portion with a distal end extends from inside of the housing coupled the speaker unit (figures 5-7), which reads on the first end and is coupled to the attachment portion (10) external the housing (4), which reads on the second end; and specifically in respect to figure 7, the pinna inserting portion with a distal end has a projected longitudinal axis, excluding the longitudinal axis of the housing/main tube portion, which forms an obtuse angle in respect the vertical axis of the housing when the earphone device is worn in ear of the user. However, Hosaka fails to disclose an acoustic damper. The examiner takes official notice that the use of an acoustic damper was well known. Thus, it would have been obvious to of the ordinary skill in the art at the time the invention was made to modify the invention of Hosaka by implementation an acoustic damper for the purpose of damping the transmission of the signal path with tube and providing an modified frequency response of the earphone device as desired for optimal performance.

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Regarding claim 43, Hosaka discloses everything claimed as applied above (see claim 41). Hosaka further discloses that the attachment is an elastic material, rubber (col. 4, lines 22-24), which provides an inherent support of a foam ear tip portion.

Regarding claim 44, Hosaka discloses everything claimed as applied above (see claim 41). Hosaka further discloses the distal end (5), which reads on a rigid; the distal end of the pinna inserting portion coupled to the attachment portion (10) and the auditory canal fitting portion (12), which indicates 2nd end of the tube nipple is positioned within the flexible tube portion of the flexible ear tip.

Regarding claim 45-46, Hosaka discloses everything claimed as applied above (see claim 41). Hosaka fails to disclose a flexible channel located between the output port of the receiver and the first end of the rigid tube nipple. However, Hosaka does not disclose any restriction to the acoustic path or channel to pinna inserting portion. And thus, a flexible channel of an acoustic tube or channel is well known in the art. Thus, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Hosaka by implementing a flexible material for constructing the acoustic path or tubing, such as a elastic plastic material, which a commonly used tubing structure and material, for the purpose of enabling adjustable adaptation of the acoustic tube of the earphone device.

Allowable Subject Matter

8. **Claims 2, 37 and 42** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims

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9. **Claims 24-34** are allowed.

10. The following is an examiner's statement of reasons for allowance:

Regarding independent claim 24, the prior art of record discloses an earphone housing, a speaker (a receiver), an optical disc player (an audio signal source), and flexible ear tip and a tube nipple. However, the prior art of record fails to specifically disclose the tube nipple and the housing being configured and arranged to form an obtuse angle of approximately 118 degrees between the longitudinal axis of the tube nipple and vertical axis of the housing.

Regarding independent claim 30, the prior art of record discloses an earphone housing, a speaker (a receiver), an optical disc player (an audio signal source), and flexible ear tip, a tube nipple and an acoustic damper. However, the prior art of record fails to specifically disclose the tube nipple and the housing being configured and arranged to form an obtuse angle of approximately 118 degrees between the longitudinal axis of the tube nipple and vertical axis of the housing.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments


11. The applicant did not provide any arguments; remarks were made in the respect to previously indicated allowable claims and the cancellation of others claims. However, upon further searching, a new art rejection has been provided as set forth in the Office Action above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Laura A. Grier
January 7, 2005